AMENDMENTS TO THE CLAIMS

1. (**Currently amended**) A method for potentiating a morphogen activity in a neuron, comprising ~~administering to a mammal~~ contacting the neuron with a composition, the composition comprising a molecule which: ~~that~~

(a) is a neuropoietic cytokine antagonist, a retinoid antagonist, or a cAMP-dependent messenger pathway inhibitor; and

(b) overcomes ~~morphogen~~ inhibition of the morphogen activity *in vitro*~~,~~;

thereby potentiating the morphogen activity in a neuron.

2. (**Currently amended**) A method for promoting neuronal cell growth, comprising ~~administering to a mammal~~ contacting a neuron with a composition, the composition comprising a molecule which: ~~that~~

(a) is a neuropoietic cytokine antagonist, a retinoid antagonist, or cAMP-dependent messenger pathway inhibitor; and

(b) overcomes ~~morphogen~~ inhibition~~,~~ of ~~so as to potentiate~~ growth-promoting effects of endogenous morphogens *in vitro*;

thereby promoting neuronal cell growth.

3 - 4. (**Canceled**)

5. (**Previously presented**) The method of claim 1, wherein said morphogen activity is endogenous.

6. (**Previously presented**) The method of claim 1, wherein said morphogen activity is the result of an exogenously provided morphogen.

7. (**Currently amended**) The method of claim 42, wherein said composition further comprises a morphogen.

8. (**Currently amended**) The method of claim ~~3 or 4~~1 or 2, wherein said ~~disorder~~ neuron is injured by Alzheimer's disease, Parkinson's disease, Huntington's disease, senile dementia, alcohol-induced dementia, or stroke.

9 -10. **(Canceled)**

11. (**Currently amended**) The method of claim ~~10~~ 1 or 2 , wherein said ~~neuropoetic~~ neuropoietic cytokine antagonist is an LIF (Leukemia-Inhibitory Factor) antagonist or a CNTF (Ciliary Neurotrophic Factor) antagonist.

12. (**Currently amended**) The method of claim 11, wherein said ~~neuropoetic cytokine antagonist is a~~ LIF (Leukemia-Inhibitory Factor) antagonist ~~which~~ is a monoclonal antibody to a gp130 protein.

13 – 15. **(Canceled)**

16. (**Previously presented**) The method of claim 7, wherein said morphogen comprises an amino acid sequence selected from a sequence:

(a) having at least 70% homology with the C-terminal seven-cysteine skeleton of human OP-1 (Osteogenic Protein 1), residues 330-431 of SEQ ID NO: 2;
(b) having greater than 60% amino acid sequence identity with said C-terminal seven-cysteine skeleton of human OP-1;
(c) defined by Generic Sequence 7, SEQ ID NO: 4;
(d) defined by Generic Sequence 8, SEQ ID NO: 5;
(e) defined by Generic Sequence 9, SEQ ID NO: 6;
(f) defined by Generic Sequence 10, SEQ ID NO: 7; or
(g) defined by OPX, SEQ ID NO: 3.

17. (**Previously presented**) The method of claim 7, wherein said morphogen is human OP-1 (Osteogenic Protein 1), mouse OP-1, human OP-2 (Osteogenic Protein 2), mouse OP-2, 60A, GDF-1 (Growth/Differentiation Factor-1), BMP2A (Bone Morphogenesis Protein 2A), BMP2B (Bone Morphogenesis Protein 2B), DPP (Decapentaplegic), Vgl, Vgr-1 (Vg1-related sequence), BMP3 (Bone Morphogenesis Protein 3), BMP5 (Bone Morphogenesis Protein 5), or BMP6 (Bone Morphogenesis Protein 6).

18. (**Previously presented**) The method of claim 7, wherein said morphogen is OP-1.

19. (**Currently amended**) The method of claim 1, wherein the ~~molecule~~ neuropoietic cytokine antagonist binds an endogenous ligand for a cytokine receptor~~or a retinoid receptor~~.

20 – 21. (**Canceled**)

22. (**Currently amended**) The method of claim ~~19~~1 or 2, wherein the ~~molecule which binds an endogenous ligand for a retinoid receptor~~ retinoid antagonist is a retinoic acid receptor or retinoid X receptor.

23 - 24. (**Canceled**)

25. (**Currently amended**) The method of claim ~~24~~1, wherein said cAMP-dependent messenger pathway inhibitor comprises a protein kinase A inhibitor.

26. (**Previously presented**) The method of claim 25, wherein said protein kinase A inhibitor is (2-p-bromocynnamylaminoethyl)-5-isoquinolinesulfonamide, an enantiomer of dibutyryl cAMP, or an enantiomer of cAMP.

27 – 32. (**Canceled**)

33. (**New**) The method of claim 1, wherein the retinoid antagonist binds an endogenous ligand for a retinoid receptor.

34. (**New**) The method of claim 1, wherein said morphogen activity is activity to stimulate dendritic growth.

35. (**New**) The method of claim 1, wherein said morphogen activity is activity of OP-1.

36. (**New**) The method of claim 2, wherein said neuronal cell growth is dendritic growth.

37. (**New**) The method of claim 1, 2, 34 or 36, wherein said neuron is a sympathetic neuron.

38. (**New**) The method of claim 11, wherein said CNTF inhibitor is phosphatidylinositol-specific phospholipase C.